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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Attorney Docket No. 03248.00045

PATENT

RECEIVED  
MAY 22 2003  
GROUP 1700

In the Application of:

Mulligan, et al.

Serial No. 10/005,085

Filed: December 4, 2001

For: Multi-Functional Composite Structures

Examiner: Savage, Jason L.

Art Unit: 1775

Commissioner for Patents  
Alexandria, VA 22313-1450

**RESPONSE TO RESTRICTION REQUIREMENT AND  
PRELIMINARY AMENDMENT**

Sir:

This paper is responsive to the Office Action mailed March 17, 2003 in connection with the above-identified patent application. The Office Action set a one-month shortened statutory period for response. Applicants petition for a one (1) month extension of the term. Applicants' undersigned representative also authorizes the charging of Deposit Account No. 19-0733 for the extension fee and any other fee that might be due upon entry and full consideration of this amendment.

**ELECTION**

Applicants provisionally elect, with traverse, to prosecute Group I, claims 1-14, drawn to a multi-functional structure. Applicants reserve the right to file divisional application(s) directed to the subject matter of the non-elected claims of Groups II through VI prior to the termination of proceedings in this patent application.

Applicants traverse the requirement for restriction. The elected group I and the non-elected groups II through VI are all directed to multi-functional structures that are capable of more than one discrete function and to particular processes for preparing multi-functional structures. They are not unrelated as defined in MPEP § 806.04.

In response to the requirement for restriction between the different groups, Applicants submit that all of the groups are directed to multi-layered, multi-functional fibrous monolith structures and to methods of making the composite structures. Independent claim 1 is directed to a multi-functional fibrous monolith structure, and the claims of Groups II through VI are directed to various species of the structures of claim 1. The Group II claims are drawn to methods of forming a multi-functional composite structure having piezoelectric/electrostrictive properties. The claim in Group III is directed to a multi-functional composite part containing repeated structural units of a multi-layered structure that includes piezoelectric/electrostrictive functional layers. Similarly, the claim in Group IV is drawn to a multi-layered composite structure where the layers, which are functionally different, include an electrically conductive material and an electrically insulating material. Regarding the Group V, the claims are directed to a layered fibrous monolith structure where one of the materials is a piezoelectric material such that the structure is multi-functional. Lastly, the claims in Group VI are directed to a multi-layered

composite structure where the materials used in the composite structure have different electromotive potentials.

All of the claims in the original application are directed to multi-layered composite structures that are capable of two or more discrete functions, where the number of layers and the materials of the layers depend on the desired structural and functional characteristics of the final composite structure. Therefore, as the groups are not unrelated, applicants traverse the requirement for restriction.